

BOARD OF PUBLIC WORKS

July 8, 1996

AGENDA ITEM: #6

ACTION: **Board of Directors approval and recommendation to City Council.**

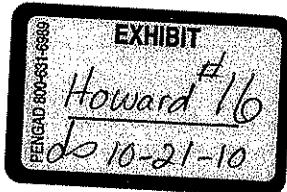
RECOMMENDATION: **Accept the low evaluated bid from Dykema Excavators in the amount of \$117,752 for the installation of a dilution pipeline at the James De Young Power Plant, and approve a budget transfer for the same amount.**

SUMMARY: **The Department of Natural Resources requires that the outlet water at the power plant be at or below 95 degrees F. During the months of June, July, and August, the temperature of Lake Macatawa often reaches into the mid eighties, which coupled with the increased load for these months, will often raise the outlet temperature above the 95 degree limit.**

The most cost-effective solution to this problem is to install a dilution line running from the inlet water line to the outfall, bypassing the plant. The other method that will be used this summer for not exceeding the maximum temperature will be to reduce generation.

Tim Morawski
Tim Morawski, P.E.
General Manager

TM/d



Holland Board of Public Works
James DeYoung Power Plant
Units 4 & 5 Circulating Water Dilution Recommendation

Introduction

This project consists of installing a dilution pipeline to decrease the plant's outfall water temperatures to DNR acceptable levels of 95 degrees F or less.

Recommendation

The staff recommends the Board accept the low evaluated bid provided by Dykema Excavators of \$117,752.00 and forward the recommendation to City Council for their approval.

Evaluation

Five contractors were sent requests for bids on the dilution project. Those bids are listed below.

<u>Company</u>	<u>Evaluated Bid</u>
Dykema Excavators	\$117,752
My-Con, Inc.	\$188,015
R. L. Morris and Sons	No bid
Geocon	No bid
Kamminga & Roodvoets, Inc.	No bid

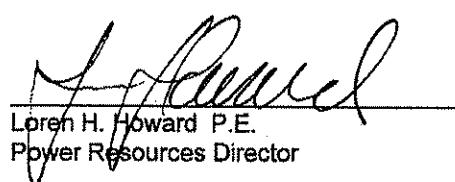
Discussion

The Department of Natural Resources requires that our outlet water be at or below 95 degrees F. During June, July, and August, the temperature of Lake Macatawa often reaches into the mid eighties, which coupled with the increased load for these months will often raise the outlet temperature above the 95 degree limit. Of the many solutions considered for controlling the effluent water temperature, one of the most cost effective solutions is to install a dilution line running from the inlet water line to the outfall, bypassing the plant. This dilution line will allow a portion of the lake water to mix with and cool the outfall water providing a cooling of 3 degrees F to the outfall. While this solution alone will not guarantee that temperatures are maintained below 95 degrees, it will provide a significant method for maintaining the required temperatures. The other method that will be used this summer for not exceeding the maximum temperature will be to reduce generation.

Dykema Excavators will be required to provide and install all components of the dilution system, including piping, connectors, two butterfly valves, three pipe taps, and five manholes. The butterfly valves will be used to regulate flow through the dilution line, while flow meters will be fitted to the pipe taps on both the main and dilution lines to make it possible to measure each line's respective flow rate. In addition, the contractor is responsible for disposal and replacement of all excavated material including asphalt, concrete, and soil.

Conclusion

This project was not budgeted for in FY97. A budget transfer of \$117,752 is requested from contingency to account number 100 502 9910.



Loren H. Howard P.E.
Power Resources Director

7/2/96

Date

Sealed proposal delivered to the BPW	June 12, 1996
Contractor mobilize on-site	July 8, 1996
Bar chart schedule of activities	With Proposal
A report of NDE testing results	One week after test completion
All welding procedures and welding qualification results	One week prior to start of installation
Contractor off-site	July 19, 1996

10. ADDITIONAL NOTES

1. Holland BPW will make available one 480 VAC, 60 Hz, 3 phase power source. Contractor shall supply a power cord from the source to equipment. Contractor shall supply owner with power requirements at time of submitting proposal.
2. Holland BPW will provide break area, hand washing facility, and toilet facilities.
3. Holland BPW will provide water sources.
4. Contractor to supply their own compressed air.

11. PRICING

The Contractor shall provide an itemized list of manhours and pricing required to complete each of the items listed under Scope of Work.

Contractor's Name DYKEMA EXCAVATORS, INC.

	<u>Manhours</u>	<u>Pricing (\$)</u>
Item 1.	_____	_____
Item 1 Option.	_____	_____
Item 2.	_____	_____
Item 3.	_____	_____
Total	_____	<u>\$117,752.00</u>

Daniel Schmid
 Dykema Excavators Inc.
 1730 3 mile Rd NE
 Grand Rapids Michigan 49505

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Contractor's Name

Mycon Inc

	Manhours	Pricing (\$)
Item 1.	_____	<u>738,640.00</u>
Item 1 Option.	_____	<u>Same as Above</u>
Item 2.	_____	<u>29,000.00</u>
Item 3.	_____	<u>20,375.00</u>
Total	_____	<u>188,015.00</u>